

Chapter 3: Erosion and Sediment Control Laws

State model soil erosion and sediment control act

Erosion control and flood prevention practices have been used by conservation districts to keep sediment and analogous pollutants generated by agriculture and forestry out of waterways.⁵⁷ In the late 1960's, some local governments started to enact ordinances that were based on district expertise to deal with erosion-caused pollution from urban development. In the 1970's, almost all states turned to the districts for help in controlling erosion-caused water pollution from agricultural and other land-disturbing activities, such as construction and mining. Some states specifically amended their conservation district laws to authorize the state conservation agency and the districts to participate in the state water quality management programs. These were initiated by Section 208 of the Federal Clean Water Act, while others allowed such participation under the original authorities granted by the state conservation district laws.

In 1973, adopting the model prepared by a task force after the March 1972 meeting of the Workshop on Soil Erosion sponsored by the National Association of Conservation Districts, the Council of State Governments issued a model state act for soil erosion and sediment control (hereinafter, Model Act).⁵⁸ The Model Act was designed to set down the basic requirements for an effective state soil erosion and sediment control law and amend state soil and water conservation district laws to strengthen and extend their existing programs. The principal provisions of the Model Act follow.

First, the Model Act requires the state conservation agency to prepare a comprehensive program to control soil erosion and sedimentation resulting from land-disturbing activities. The program must identify critical erosion and sedimentation areas and include guidelines for conservation districts to use in developing regulatory programs. Land-disturbing activities are defined to include agricultural and nonagricultural activities that cause accelerated soil erosion but not to include minor activities such as home gardens, landscaping, and repairs.

Second, all conservation districts are required to adopt district-level erosion and sediment control programs (based on the state programs) and district conservation standards for various kinds of soil and land uses. The conservation standards are performance standards that may include soil-loss limits, erosion control practices, and water quality management practices.

Third, because a district-approved erosion and sediment control plan must be obtained for all nonagricultural land-disturbing activities, local or state agencies that issue permits for grading, building, or similar land-disturbing activities must require applicants to submit a district-approved erosion and sediment control plan with the application.

Fourth, under the Model Act, users of agricultural and forest land must either obtain and implement a district farm conservation plan or implement the district

⁵⁷Holmes, *Second Appraisal*, *supra* note 16, at 34.

⁵⁸For a thorough discussion of the Model state act for Soil Erosion and Sediment Control, COMMITTEE ON SUGGESTED STATE LEGISLATION, COUNCIL OF STATE GOVERNMENTS, MODEL STATE ACT FOR SOIL EROSION AND SEDIMENT CONTROL (1972).

conservation standards for their type of operations. It may be necessary for them to install any erosion and sediment control measures included in their conservation plans or to comply with district conservation standards, but only if cost-sharing assistance of at least 50 percent or adequate technical assistance is made available to them.

Fifth, the Model Act gives the permit-issuing authorities (for activities requiring permits) and conservation districts (for agricultural activities) the authority to inspect land-disturbing activities for violation of required plans or conservation standards and to issue administrative orders requiring specific remedial measures. However, the administrative orders are not final but subject to judicial review.

Sixth, the Model Act allows county attorneys to bring enforcement actions on request of permit-issuing authorities or conservation districts. Violations of administration orders are subject to injunctions and/or criminal penalties.

Finally, the Model Act authorizes necessary appropriations.

All states, as well as the U.S. Virgin Islands and the District of Columbia, have enacted laws that use district-type erosion control plans in statewide programs of erosion and sediment control for water quality management purposes.

In the twelve regions, most state soil erosion and sediment control laws passed since 1973 follow the Model Act to some extent. The state erosion and sediment control laws are generally amendments to the conservation district law or new sections added to the code following the conservation district law. Moreover, they usually require the state programs to identify critical sedimentation areas and to provide guidelines for local programs on district erosion control standards. They also require local authorities to confirm erosion and sediment control methods before granting permits for urban development activities.

State erosion and sediment control laws

As a response to the issuance of the Soil Erosion and Sediment Control Model Act, all states, including the U.S. Virgin Islands, and the District of Columbia have committed to control soil erosion and sedimentation problems, whether through their erosion and sediment control laws, conservation districts laws, or water quality and stream control laws. Among the 17 states surveyed, Delaware, Georgia, Maryland, and Nebraska control erosion and sediment problems through enactment of separate Erosion and Sediment Control laws; 11 states—Alabama, Arkansas, California, Idaho, Iowa, Mississippi, Oregon, Tennessee, Texas, Utah, and Wisconsin—authorize erosion and sediment control practices under the original conservation districts laws; and Pennsylvania and New Mexico regulate their soil erosion and sediment problems under the water quality and watershed district-type laws. Although these acts take different forms, they have many common features.

All of the surveyed states require their conservation districts to adopt district-level erosion and sediment control programs (based on the state programs) and district conservation standards for various kinds of soil and land uses.

However, as methods of control, states generally choose one or more among the following three methods—
approved erosion and sediment control plan required for land disturbances,

establishment of soil loss limits, and permits on the basis of an approved plan.

Most of the states surveyed require the state conservation agency to prepare a comprehensive program to control soil erosion and sedimentation resulting from land-disturbing activities.

The program must identify critical erosion and sedimentation areas and include guidelines for conservation districts to use in developing regulatory programs. They choose to exempt certain activities from regulation by defining land-disturbing activities to include agricultural and nonagricultural activities that cause accelerated soil erosion but not to include minor activities such as home gardens, landscaping, and repairs. Among the states in this group, Pennsylvania is unique in a sense that an acceptable plan is required at the site of activity. Delaware and Pennsylvania require both an approved erosion and sediment control plan for land disturbance and permits on the basis of the approved plan, whereas Iowa, Nebraska, and Wisconsin, control soil erosion and sediment problems by establishing soil loss limits.

To provide some flexibility, all 17 states provide exemptions from the state laws. Exemptions are different from state to state because they are designed to fit different geographical traits and conservation concerns of each state. For example, Maryland exempts certain agricultural land management practices, construction of agricultural structures, or construction of single-family residences or their accessory buildings that disturb an area of less than one-half acre and occur on lots of 2 acres or more (Calvert County is excepted from this exception). Delaware exempts utility projects disturbing less than 5,000 square feet of land from its laws. For Georgia, exemptions from the laws include agriculture and horticulture, mining, home or small sites, highways or railways, and minor land disturbances.

To enforce soil erosion and sedimentation control programs, all 17 states authorize the responsible districts to inspect land-disturbing activities for violation of required plans or conservation standards and to issue administrative orders requiring specific remedial measures. Violations of administrative orders are subject to injunctions or civil penalties, or both. However, administrative orders are not final but subject to judicial review.

Delaware (region 1).—In 1977, Delaware added to its statutes a new chapter titled Erosion and Sediment Control. In 1990, this law was revised and became effective on June 15, 1990. However, the 1990 Act has not provided any detailed explanation of the changes.⁵⁹

The 1990 Act authorizes a comprehensive and coordinated statewide erosion and sediment control program to conserve and protect land, water, air, and other resources.⁶⁰ In cooperation with the local and state agencies, it named the Department of Natural Resources and Environmental Control to be the controlling agency responsible for establishing and implementing the legislative policy.⁶¹

⁵⁹The revised version substituted the present § 4001 to 4016 for the former § 4001 to 4017.

⁶⁰Erosion and Sedimentation Control, DEL. CODE ANN. tit. 7, § 4001 (1991).

⁶¹Id. § 4001(b) (1991).

The department has a number of powers including—

- providing technical and other assistance to districts, counties, municipalities, and State agencies;⁶²
- developing and publishing minimum standards, guidelines, and criteria for implementing sediment and stormwater program components, and model sediment and stormwater ordinances for use by districts, counties, and municipalities;⁶³
- reviewing the implementation of all components of the statewide sediment and stormwater programs;⁶⁴
- requiring that appropriate sediment and stormwater management provisions be included in erosion and sediment control plans;⁶⁵
- cooperating with appropriate agencies of the United States or other states;⁶⁶
- conducting studies and research regarding stormwater runoff;⁶⁷
- conducting and supervising education programs regarding sediment control and stormwater management;⁶⁸
- reviewing and approving designated watersheds for the purpose of this chapter;⁶⁹ and
- performing enforcement functions.⁷⁰ Moreover, the law imposes monetary penalties for all violators.⁷¹

After July 1, 1991, unless exempted, all persons engaging in land-disturbing activities must submit a sediment and stormwater management plan to the appropriate plan approval authority to obtain a permit to proceed.⁷² Utility projects disturbing less than 5,000 square feet of land are exempt from this law.⁷³

Maryland (region 1).—Maryland enacted the Erosion and Sediment Control law,⁷⁴ that requires an approved erosion and sediment control plan for land disturbance and allows methods of control only on the basis of an approved plan. The Maryland law covers a number of resources including land, water, and other natural resources.⁷⁵ In addition, it exempts certain agricultural land management practices, construction of agricultural structures, or construction of single-family residences or their accessory buildings that disturb an area of less than one-half acre and occur on lots of 2 acres or more (Calvert County is excluded from this exception).⁷⁶ However, it requires all local governments to withhold building and grading permits from urban

⁶²MD. CODE ANN., ENVIR. § 4006(b)(1).

⁶³Id. § 4006(b)(2).

⁶⁴Id. § 4006(b)(3).

⁶⁵Id. § 4006(b)(4).

⁶⁶Id. § 4006(b)(5).

⁶⁷Id. § 4006(b)(6) (1991).

⁶⁸Id. § 4006(b)(7).

⁶⁹Id. § 4006(b)(9).

⁷⁰Id. § 4012(c).

⁷¹Id. § 4015.

⁷²Id. § 4003(a) (1991).

⁷³Id. § 4004(c).

⁷⁴Id. § 4-101 et seq. (1993).

⁷⁵Id. § 4-101.

⁷⁶MD. CODE ANN., ENVIR. § 4-102.

developers until the local conservation district has approved the developer's sediment control plan.⁷⁷

The only participating State agency is the Department of Natural Resources. This agency's responsibilities include developing criteria, standards, and guidelines; reviewing and approving local programs or plans; and performing enforcement functions. Also, it assists local agencies with ordinances, regulations, and programs and enforces and approves State and Federal agency plans.

Local agencies such as the conservation districts, the counties, the cities, and the towns or townships may also participate. The conservation districts have a few responsibilities including—

- reviewing and approving erosion and sediment control plans;
- assisting county or other local agencies to develop ordinances or regulations;
- adopting standards, criteria, and guidelines; and
- performing enforcement functions.

In addition, the county, city, town, or township also has a number of responsibilities such as reviewing and approving plans (in municipalities not within a district), adopting ordinances, issuing permits on the basis of an approved plan, performing enforcement functions, and issuing rules and regulations.

Pennsylvania (region 1).—Pennsylvania regulates its soil erosion and sedimentation under its water quality laws. As methods of control, it requires an approved erosion and sediment control plan for land disturbance. An acceptable plan is required at the site of activity and permits methods only on the basis of an approved plan. Because its sedimentation law is under State water quality laws, the covered resources are water, streams, and streambanks. The State controlling agency is the Department of Environmental Resources that has a number of responsibilities including developing policies; developing criteria, standards, and guidelines; adopting rules and regulations; reviewing and approving local programs or plans; and performing enforcement functions.

Local agencies including conservation districts, counties, and cities can participate. The conservation district has two particular responsibilities: reviewing and approving erosion and sediment control plans, and performing enforcement functions. In addition, the participating county or city has a few responsibilities, including adopting programs, reviewing and approving plans, issuing permits on the basis of an approved plan, and performing enforcement functions.

Alabama (region 2).—Alabama has enacted a district-type erosion and sediment control law that authorizes the state conservation agency and the districts to develop and execute soil erosion and sediment control plans or programs.⁷⁸

Georgia (region 2).—In 1975, Georgia enacted the Control of Soil Erosion and Sediment law, which has not been significantly revised since then.⁷⁹ It covers land, water, and

⁷⁷MD. CODE ANN., ENVIR. § 4-103.

⁷⁸ALA. CODE § 9-8-51 (1987).

⁷⁹Control of Soil Erosion and Sedimentation, GA. CODE ANN. § 12-7-1 et seq. (1992). The Act of 1992 (74 G.A.) ch. 1184 § 11 repealed section 161A.75 regarding financial incentive for soil conservation on forest lands.

other resources, such as air.⁸⁰ As methods of control, it provides that the approved erosion and sediment control plan is required for land disturbance and allows methods of control only on the basis of an approved plan.⁸¹ In addition, the law allows exemptions, meaning that local ordinances may not regulate land-disturbing activities that are expressly excluded from the regulation.⁸² These exemptions are agriculture and horticulture, mining, home or small site development, highways or railways, and minor land disturbances.⁸³

The participating agencies include the soil and water conservation district, the Department of Natural Resources, and the Division of Environmental Protection of the Department of Natural Resources. These agencies have the responsibility to develop policies; develop criteria, standards, and guidelines; adopt rules and regulations;⁸⁴ review and approve local programs or plans;⁸⁵ and perform enforcement functions, which may include permits, inspections, complaints, violation procedures, fines, and other legal actions.⁸⁶ These agencies also may assist local agencies in adopting a plan where local agencies fail to do so.

The law also requires the participation of local agencies such as conservation districts, counties, and cities. A conservation district's one main responsibility is to review and approve erosion and sediment control plans. On the other hand, the county, city, town, or township has a number of responsibilities such as adopting ordinances, issuing permits on the basis of an approved plan, and performing enforcement functions that may include permits, inspections, complaints, violation procedures, fines, and other legal actions.

Arkansas (region 3).—The Conservation District Law of Arkansas, which is similar to Georgia's, also authorizes the implementation of soil erosion control practices.⁸⁷

Mississippi (region 3).—The Soil Conservation District Law of Mississippi, which is similar to Georgia's, also authorizes the implementation of soil erosion control practices.

Wisconsin (region 4).—In 1981, Wisconsin revised its soil and water conservation law to replace the independent conservation districts that have county land conservation committees (hereinafter CLCC's) and establishing a State erosion control program including control of nonpoint-source pollution.⁸⁸ The Wisconsin law has adjusted the State program considerably to meet local conditions. Furthermore, it can be considered a statewide erosion and sediment control law because it provides statewide erosion control planning and cost sharing and enforcement in most areas of the State.⁸⁹ The Wisconsin law is unique in that it sets a specific time by which the statutory soil erosion control goals must be met. It provides that the soil erosion rate on each individual cropland field in Wisconsin is not to exceed the tolerable erosion level on or after January 1, 2000.⁹⁰

⁸⁰GA. CODE ANN. § 12-7-2.

⁸¹Id. § 12-7-7.

⁸²Op. Att'y Gen. No. 87-20 (1987).

⁸³GA. CODE ANN. § 12-7-17 (1992).

⁸⁴Id. § 12-7-5.

⁸⁵Id. § 12-7-8.

⁸⁶Id. § 12-7-8(d), § 12-7-15.

⁸⁷Conservation Districts Law, ARK. CODE ANN. § 14-125-101 et seq. (Michie 1987).

⁸⁸WIS. STAT. ANN. § 92.02(1) (West 1990 & Supp. 1993).

⁸⁹Id. § 92.02-92.18.

⁹⁰Id. § 92.025.

The Department of Agriculture, Division of Agricultural Resource Management is required to allocate soil erosion control planning funds among the CLCC's.⁹¹ The division has a number of responsibilities including—

assisting the committees in preparing soil erosion control plans,

reviewing and developing recommendations to improve such plans,

approving or disapproving the plans, and

concentrating state resources in areas that have the most severe erosion or nonpoint source pollution problems.

Moreover, the division allocates funds for up to 70 percent of the cost of conservation practices to CLCC's that have approved soil erosion control plans.

Each CLCC must prepare a detailed erosion control plan that specifies maximum acceptable soil erosion rates and identifies the land parcels where soil erosion standards are not being met.⁹² This plan must also specify the necessary changes in land use or management practices to bring these parcels into compliance with the standards and identify the methods used to assist landowners and land users to control erosion, including technical assistance and practices chosen for cost sharing under contract with the CLCC.⁹³ In addition, the contracts require the landowner or land user to return cost-share payments if the practices are not maintained or if title to the land is transferred to an owner who does not agree to comply with the requirements of the CLCC plan.

The Wisconsin law also authorizes the CLCC's to develop erosion and sediment control ordinances for enactment by the county. The local ordinances may regulate or prohibit land uses and land management practices that cause excessive soil erosion, sedimentation, nonpoint source water pollution, or stormwater runoff.⁹⁴ However, before any ordinance is enacted, it must be approved by the county board of supervisors and by majority vote of a referendum open to all voters in the affected area. Furthermore, the ordinances are applicable throughout the county.

The county erosion and sediment control ordinances also prescribe necessary enforcement procedures, including injunctions and civil forfeitures. Counties that enact such ordinances must provide enforcement personnel. Before an enforcement action can be brought against any violator, he or she is entitled to at least 1 year's notice of the violation together with a management plan, explaining all reasonable options for achieving acceptable soil erosion rates and the technical assistance and financial assistance—including cost-sharing, loans, or tax incentives—available for taking such options.

Wisconsin law is unique in the sense that it allows counties to regulate land use and land management practices. Although the counties already had authority to regulate urban land development under their existing land-use regulatory powers, it has not

⁹¹WIS. STAT. ANN. § 92.06-92.07.

⁹²Id. § 92.10(6).

⁹³Id.

⁹⁴Wisconsin is one of the few states which have adopted statutory language that includes stormwater management among the purposes of local erosion and sediment control laws. In other states, such as Virginia, the state conservation agency has amended its erosion and sediment control standards and guidelines to ensure that local ordinances require developers to include stormwater runoff management features in their already required erosion and sediment control plans.

been the custom until recently to regulate agricultural land management practices. Wisconsin's old conservation district law had previously given this authority to the districts, not the counties.

Iowa (region 5).—Iowa authorizes participation in the soil erosion and sediment control plan in its original authority conferred by the State conservation district law. Iowa's 1971 amendment to its conservation district law was the first agricultural erosion and sediment control law.⁹⁵ As a method of control, it requires that all conservation districts set soil loss limits for different classes of land and requires landowners to comply with the soil loss limits. If landowners' failure to comply with the requirement results in damages to other land or to State interests in navigable and meandering streams and lakes, the district may issue administrative orders to those landowners to install remedial soil and water conservation practices. These administrative orders are legally enforceable, provided that cost-sharing assistance is available.

The Iowa law covers only soil and water resources and applies to all public land that is used for horticultural or agricultural purposes. However, it allows for exemption from this law for land used for study, evaluation, understanding, and control of erosion, sedimentation, and runoff water that is carried out by or in conjunction with institutions governed by the Board of Regents.⁹⁶ The participating State agencies are the Soil and Water Conservation District, and the Department of Natural Resources, which have a number of responsibilities such as developing policies and reviewing and approving local programs or plans. They may also assist local agencies with ordinances, regulations and programs, and cost-sharing.

Local conservation districts may also participate. They have responsibilities such as reviewing and approving erosion and sediment control plans; adopting rules and regulations; and performing enforcement functions, which may include permits, inspections, complaints, violation procedures, fines, and other legal actions.

Nebraska (region 5).—In 1986, Nebraska enacted its Erosion and Sediment Control Act.⁹⁷ Nebraska is one among a few states that has taken a stance regarding soil conservation and control of nonpoint sources of water pollution. The Nebraska law directs the Department of Natural Resources and the Department of Environmental Control to be the participating state agencies, with a few responsibilities such as developing criteria, standards, and guidelines; reviewing and approving local programs or plans; assisting districts, cities, and counties in the implementation of the State and local erosion and sediment control programs; and performing enforcement functions.

The Nebraska law requires the Director of Natural Resources, in cooperation with the Nebraska Natural Resources Commission and other State or Federal agencies, to develop a detailed erosion and sediment control program that specifies the soil-loss limits for the various types of soils in the State. The program must specify the goals and strategy to reduce soil losses on all lands in the State to the indicated soil-loss limit. The program must also indicate guidelines for establishing priorities for the program's implementation and specify the types of assistance to be provided by

⁹⁵Iowa's sediment control law (House File 73) was passed by the 64th Iowa General Assembly in 1971. This bill provided that soil erosion should be declared a nuisance and abated as such after due process.

⁹⁶IOWA CODE ANN. § 161A.54 (West 1993).

⁹⁷Erosion and Sediment Control Act, NEB. REV. STAT. §§ 2-4601 to 2-4613 (1987).

the State to the districts, cities, or counties in implementing the soil erosion and sediment control program.⁹⁸

Natural resources districts, counties, municipalities, other local governments and political subdivisions of the State, and other public and private entities may also participate in the Nebraska Act.⁹⁹ However, if the county or municipality has not assumed jurisdiction, the act authorizes the district to inspect any land within the district after receiving a written and signed complaint alleging a violation of erosion units.¹⁰⁰ Complaints may be filed by any landowner or land operator or any other public or private entity whose land is being damaged by sediment.¹⁰¹ Inspections following the complaint can be carried out only if the owner or operator-violator is given notice of the complaint and the opportunity to accompany the inspector.¹⁰² The owner or operator of land and the district may enter into a legally enforceable agreement to eliminate excess erosion.¹⁰³ However, if no agreement is reached, the findings of the inspector are presented to the district's board of directors and the owner or operator is given reasonable opportunity to be heard in a public hearing.¹⁰⁴ The district is required to issue an administrative order if it finds that alleged excessive soil erosion or sedimentation, or both, is occurring.¹⁰⁵ Furthermore, the district may specify alternative practices for soil and water conservation or erosion or sediment control, which the owner or operator may use to comply with the administrative order.¹⁰⁶

New Mexico (region 6).—New Mexico has enacted the Watershed District Act, a district-type erosion and sediment control law, which authorizes the State conservation agency and the districts to develop and execute soil erosion and sediment control plans or programs.¹⁰⁷

Texas (region 6 & 7).—The Soil and Water Conservation Districts Law of Texas authorizes soil erosion and sedimentation control practices.

Idaho (region 8).—Idaho includes in its conservation district law the authorization for the State conservation agency and the districts to participate in soil erosion and sediment control plans or programs.

Utah (region 8).—Utah authorizes participation in soil erosion and sediment control plans under the Soil Conservation Commission Act.¹⁰⁸

Oregon (region 9).—Oregon allows conservation districts to participate in soil erosion and sedimentation control programs under the original authorities granted by Oregon Soil and Water Conservation District laws.¹⁰⁹

⁹⁸NEB. REV. STAT. § 2-4604.

⁹⁹Id. § 2-4602.

¹⁰⁰Id. § 2-4608(1).

¹⁰¹Id.

¹⁰²Id.

¹⁰³Id. § 2-4608(2).

¹⁰⁴Id.

¹⁰⁵Id.

¹⁰⁶Id. § 2-4608(3).

¹⁰⁷NEW MEXICO STAT. ANN. § 73-20-1 et seq. (Michie 1978).

¹⁰⁸Soil Conservation Commission Act, UTAH CODE ANN. § 4-18-1 et seq. (1988).

¹⁰⁹Oregon Soil and Water Conservation District Laws, OR. REV. STAT. §§ 568.210 et seq.

California (region 10).—California authorizes participation in the soil erosion and sediment control plans in its Resource Conservation Districts law.¹¹⁰

Tennessee (region 11 & 12).—Tennessee allows conservation districts to participate in soil erosion control programs under the original authorities granted by the Tennessee Soil and Water Conservation District laws.¹¹¹

Erosion and sediment control laws in selected counties

The counties that responded to the questionnaire include: Chicot, Arkansas; Fresno, and San Joaquin, California; Lee and Worth, Georgia; Anne Arundel, Baltimore, and Carroll, Maryland; Polk, Nebraska; Greene, Haywood, Shelby, Tipton, and Washington, Tennessee.

Of these counties, Haywood, Shelby, and Chicot Counties do not have soil erosion and sediment control ordinances. Washington County's soil erosion and sediment control ordinance only applies to the construction of new roads. Moreover, in Greene County, a soil erosion and sediment control ordinance exists, but it only applies to land developers, not individual landowners or operators.

The soil erosion and sediment control ordinances of the remaining counties—Anne Arundel, Baltimore, Carroll, Lee, Worth, Polk, Fresno, San Joaquin, and Tipton—have the following common features:

- The ordinances' primary purpose is to establish minimum requirements for clearing, grading, and the control of soil erosion and sediment.
- Persons cannot perform grading of land or create borrow pits, soil areas, quarries, material processing plants, or related facilities without obtaining a permit from the appropriate authority.
- The ordinances allow a number of mechanisms to be used as structured erosion and sediment control measures. Some examples include diversions, bench terraces, and sediment basins or traps.
- The controlling authority may enter periodically to determine compliance upon issuance of the permit.
- Variance may be sought from and approved by the appropriate authority.

Despite all of these similarities, these counties' ordinances have unique features, which set them apart. For example, the Anne Arundel County, Maryland, ordinance prohibits all persons from performing grading on land that lies within the 100-year flood plain of a nontidal stream or watercourse, except under certain provisions of the ordinance. Because Polk County's (Nebraska) erosion and sediment control activities are covered under the Central Platte Natural Resource District, the county board adopts soil-loss limits for various kinds of soils in the district. Moreover, although these counties provide for exemptions from the permit requirement, the exemptions differ slightly from county to county.

¹¹⁰Resource Conservation Districts Law, CAL. PUB. RES. CODE § 9001 et seq. (West 1977).

¹¹¹Soil and Water Conservation District Laws, TENN. CODE ANN. § 43-14-201 et seq. (1987 & Supp. 1993).

Anne Arundel County, Maryland (region 1).—In 1990, the Anne Arundel County Council repealed the Grading and Sediment Control Ordinance that was enacted in 1985.¹¹² A new ordinance's primary purpose is to establish minimum requirements for clearing, grading, and the control of soil erosion and sediment.¹¹³ It specifically provides that a person may not perform grading of land or create borrow pits, soil areas, quarries, material processing plants, or related facilities without first obtaining a grading permit from the Department of Natural Resources.¹¹⁴ The department can also impose conditions to prevent the creation of a nuisance or unreasonable hazard to persons or property on the issuance of a grading permit.¹¹⁵ Once a permit is granted, the permittee is strictly responsible for ensuring that all work on a site is properly undertaken with the grading permit, approved plan, stormwater management plan, and other requirements set forth in the ordinance.¹¹⁶ The permittee is also responsible for all action or inaction taken by employees, agents, or contractors.¹¹⁷

However, the permit requirement may be exempted. These exemptions are as follows:

- Grading activities associated with commercial or residential construction on a lot, provided that the applicable conditions are met.
- Accepted agricultural land management practices and construction of agricultural structures.
- The stockpiling of raw or processed soil, sand, stone, or gravel that has slopes at a natural angle of repose at quarries, and operations that are performed on cleared or unstabilized sites at concrete, asphalt, and material processing plants and construction storage yards, provided that the applicable conditions are met.
- Clearing and grading activities that are under State law, including rubble fills, sanitary landfills, and surface mines, if those activities have State permitting or licensing required.
- Grading and trenching for utility installations, provided that no more than 5,000 square feet of land is disturbed; the grading or trenching does not change the natural contour; and damaged, destroyed, or disturbed erosion and sediment control measures are restored to their original conditions.
- Grading and related earthwork incidental to an individual water well and individual sewage disposal system installed under a permit from the appropriate public authority, provided that the grading and related earthwork does not change the natural contour and disturbed areas are stabilized to prevent erosion within 72 hours of the initial disturbance.
- Grading on an existing developed lot or parcel for maintenance of landscaping purposes only, provided that the applicable conditions are met.
- An authorized county capital improvement project or public improvements installed or constructed by, or under the supervision of, the Department of Public Works or the Department of Utilities, provided that if such project

¹¹²County Council of Anne Arundel County, Maryland, Grading and Sediment Control, Legislative Session 1989, Legislative Day No. 36, Bill No. 90-89, amended final on Jan. 17, 1990.

¹¹³Id. § 2-102.

¹¹⁴Id. § 2-201(a).

¹¹⁵Id.

¹¹⁶Id. § 2-211.1.

¹¹⁷Id.

disturbs more than 5,000 square feet of land, the erosion and sediment control plan must be approved by the Anne Arundel Soil Conservation District.

Regarding the erosion and sediment control, the Grading and Sediment Control Ordinance provides that:

- Grading plans must comply with the Erosion and Sediment Control provisions.¹¹⁸
- Temporary vegetation or mulching must be used to protect areas exposed during the time of development.¹¹⁹
- Development and grading activities in the critical area on legally existing lots and legally platted parcels of land occurred on or before August 22, 1988, which would otherwise be subjected to critical area regulations, are permitted if they comply with the applicable requirements.¹²⁰

The ordinance allows development to occur within steep slope areas, conditioned on two requirements, including—

a minimum of 30 percent of the lot or parcel on which the principal structure is to be situated, is less than 15 percent of the slope and contiguous to an approved county standard road; and

the extent of cutting and filling allowed on a lot must be based on the soil conditions at the site and in compliance with the recommendation of the Department of Public Works and the Anne Arundel Soil Conservation District.

Within the natural steep slope areas, roads and streets must be placed as nearly parallel to the contour as possible to minimize cutting or filling. Furthermore, in the event that a single lot development within an area where a central storm drainage system does not exist, runoff from driveways, roofs, and other improved surfaces must be diverted and carried to acceptable outlets to minimize scouring and control erosion. Erosion control methods include: filtration beds; subsurface dry wells; and storm drainage systems, underground conduit systems, or other adequate or protected outlets.¹²²

The ordinance permits the following mechanisms to be used as structural erosion and sediment control measures:

- Diversions.
- Bench terraces.
- Outlet channels for the disposal of storm runoff from diversions, bench terraces and other structures.
- Water stabilization structures such as drop structures, grade stabilization structures, and channel liners.
- Channel bank stabilization such as riprap, rock cribs, groins, gabbros, jetties, and fencing and piling to provide a barrier that will withstand erosive forces

¹¹⁸County Council of Anne Arundel County, Maryland, Grading and Sediment Control, Legislative Session 1989, Legislative Day No. 36, Bill No. 90-89, amended final on Jan. 17, 1990 § 2-301(a).

¹¹⁹Id. § 2-301(f).

¹²⁰Id. § 2-301(j).

¹²¹Id. § 2-302(b).

¹²²Id. § 2-302(e).

exerted by flowing water or to create a bank roughness which will reduce erosive power by dissipating energy of the water as it moves along the bank line.

- Stream channel improvement to straighten, realign, or construct a new channel, to design a cross-section and to grade as necessary.
- A sediment basin or sediment trap.
- Installation and maintenance of specified erosion and sediment control measures in compliance with the provisions of this ordinance.¹²³

Regarding load-bearing fills, the ordinance prohibits ice, snow, and organic or other material that may be subject to decay.¹²⁴ However, rock or broken concrete free of any other material that have a dimension greater than 8 inches and fly ash may be placed in fills only under the direction and supervision of a professional engineer in compliance with standard engineering practices.¹²⁵ Rock and broken concrete, however, may not be buried or placed in any load-bearing fill at an elevation higher than 2 feet below finished grade or below the foundation base.¹²⁶

Sand and gravel operations and borrow pits are not permitted in a number of critical areas, including—

areas containing important natural resources such as rare, threatened, and endangered species; or areas of tidal and nontidal wetlands, areas of scientific value;

areas where highly erodible soil exists;

areas within the buffer or within 100 feet of the mean high-water line of tidal water or the edge of streams; or

areas where use would result in the substantial loss of long range productivity of forest and agriculture, a degrading of water quality, or loss of vital habitat.¹²⁷

The ordinance prohibits all persons from performing grading on land that lies within the 100-year flood plain of a nontidal stream or watercourse, unless, the State Department of Natural Resources has authorized the grading; and all necessary county permits have been secured.¹²⁸ Moreover, it strictly prohibits individuals from depositing debris or other materials in a flood plain, habitat protection area, watercourse, wetland, public street, highway, sidewalk, or other public thoroughfare. Construction debris, building rubble, and clearing rubble must be removed to an approved landfill.¹²⁹

Furthermore, upon issuing a grading permit, the department has the power to enter periodically to inspect for compliance with the grading permit and other

¹²³County Council of Anne Arundel County, Maryland, Grading and Sediment Control, Legislative Session 1989, Legislative Day No. 36, Bill No. 90-89, amended final on Jan. 17, 1990. § 2-304(b).

¹²⁴Id. § 2-306(b).

¹²⁵Id. § 2-306(c)-(d).

¹²⁶Id. § 2-306(c).

¹²⁷Id. § 2-314(e).

¹²⁸Id. § 2-401.

¹²⁹Id. § 2-402.

requirements set forth in the ordinance. This power remains in effect until all site work is completed and in compliance, and a certificate of completion is issued.¹³⁰

Baltimore County, Maryland (region 1).—The County Council of Baltimore County enacted the Excavations, Grading, Sediment Control, and Forest Management Ordinance,¹³¹ with the main purpose of controlling accelerated soil erosion and offsite resultant sedimentation to minimize damage to public and private property and attain and maintain water quality standards.¹³²

The ordinance provides that a valid grading or building permit is required for any activities that change the natural ground level of any lot or parcel.¹³³ Such permit is granted only if the following requirements are met:¹³⁴

- A grading plan must be submitted to and approved by the Department of Natural Resources.
- A sediment control plan must be submitted to and approved by the department.
- A forest establishment agreement, if applicable, and accompanying forest establishment plan, must be submitted to and approved by the department.

However, the requirements for grading and sediment control plans may be exempted if the concerned activity falls within one of the following exemptions:¹³⁵

- Agricultural land management practices and construction of agricultural structures that occur outside of existing wetlands, watercourses, and flood plain areas, provided that the applicable conditions are met.
- Grading activities that do not include any watercourses, flood plains, wetland areas, or forest buffers, and that disturb less than 5,000 square feet of land area and less than 100 cubic yards of earth.
- Grading activities that are subject exclusively to State approval and enforcement under State law and regulations, provided that the applicable conditions are satisfied.

Moreover, the grading permit requirement for all land-disturbing activities may be exempted if such activity falls within one of the following categories:¹³⁶

- Individual residential lots for which a building permit has been issued and sediment and erosion control measures are used to protect against offsite damage according to the standard sediment control plan approved by the district.
- Stockpiling of sand, stone, and gravel at concrete, asphalt, and material processing plants or storage yards.
- County sanitary landfill areas operated by the county, provided that sediment and erosion control measures are used in accordance with a plan approved by the district.

¹³⁰County Council of Anne Arundel County, Maryland, Grading and Sediment Control, Legislative Session 1989, Legislative Day No. 36, Bill No. 90-89, amended final on Jan. 17, 1990. § 2-501.

¹³¹Excavations, Grading, Sediment Control, and Forest Management, Bill No. 173-91, § 14-191 et seq. (1991).

¹³²Id. § 14-191(a).

¹³³Id. § 14-194(b).

¹³⁴Id. § 14-195(a).

¹³⁵Id. § 14-195(b).

¹³⁶Id. § 14-221.

- The filling of areas for which a county rubble landfill or solid waste processing facility permit has been issued and sediment and erosion controls have been installed in accordance with an approved grading or sediment control plan, or both.
- Grading undertaken by or on behalf of the Federal Government and State by its agencies and instrumentalities.
- The temporary stockpiling of fill material must be allowed with the approval of a stockpile permit issued by the county, subject to the requirements of the department.

The department and/or the department of public works must approve the method of disposal of surface or ground water.¹³⁷ Moreover, all grading and the installation of sediment control measures must comply with the approved grading and sediment control plans.¹³⁸

Upon notification, owner(s) of property on which any clearing, filling, or grading activity is undertaken in a watercourse, wetland area, flood plain, or forest buffer in violation of the ordinance must restore such areas following the requirements of the department.¹³⁹

Upon notification, owner(s) of any shorefront property on which there exist any eroded areas or deteriorated bulkheads that have detrimental effects on the adjacent shoreline or waterway must take necessary action required by the department.¹⁴⁰ Moreover, forest harvest activities outside of the critical area must have sediment control measures installed according to a plan approved by the district;¹⁴¹ and if such activities are within the critical area, a forest management plan approved by the county conservancy district board is required.¹⁴²

The Department of Environmental Protection and Resource Management is required to inspect sediment control measures and devices installed on all county capital improvement and public works maintenance projects.¹⁴³ If the inspection shows that the approved sediment control plan is inadequate, the plan must be modified accordingly.¹⁴⁴ To further the purpose of this ordinance, upon conviction, violators of any provision of this ordinance can be imposed a fine not exceeding \$1,000 or imprisonment not exceeding 90 days, or both.¹⁴⁵ The agency may also seek an injunction against violators of this ordinance.¹⁴⁶

Carroll County, Maryland (region 1).—In 1992, the County Commissioners of Carroll County adopted the Grading and Sediment Control Ordinance.¹⁴⁷ This ordinance provides that before clearing, grading, grubbing, excavating, or filling land; creating borrow pits, or mineral resource recovery operations; or modifying the existing topography of the land, a person must have a soil erosion and sediment

¹³⁷Excavations, Grading, Sediment Control, and Forest Management, Bill No. 173-91§ 14-194(b).

¹³⁸Id. § 14-194(a).

¹³⁹Id. § 14-196(a).

¹⁴⁰Id. § 14-197.

¹⁴¹Id. § 14-198(a).

¹⁴²Id. § 14-198(b).

¹⁴³Id. § 14-192(a).

¹⁴⁴Id. § 14-192(b).

¹⁴⁵Id. § 14-193(a).

¹⁴⁶Id. § 14-193(b).

¹⁴⁷Grading and Sediment Control, Ordinance No. 100, Carroll County, Maryland, adopted on July 13, 1992, to be effective on September 1, 1992.

control plan approved by the district and must obtain a grading permit.¹⁴⁸ Moreover, before beginning any forest harvest operation or timber removal, a person must also obtain an approved Standard Erosion and Sediment Control Plan for Forest Harvest Operations from the district, and a grading permit.¹⁴⁹

However, the ordinance allows a number of exemptions from the grading permit requirement.

First, an applicant must have a soil erosion and sediment control plan that meets the requirements of the State law and is approved by the district. In the plan no grading permit is required for grading of individual residential lots, and for grading or trenching for utility installation on sites covered by an approved soil erosion and sediment control plan and grading permit.¹⁵⁰

Second, neither a soil erosion and sediment control plan nor a grading permit is required for—

accepted agricultural land management practices and construction of agricultural structures,

clearing or grading activities that disturb less than 5,000 square feet of land area and less than 100 cubic yards of earth, and

clearing or grading activities that are subject exclusively to State approval and enforcement under State laws and regulations.¹⁵¹

The ordinance provides that all soil erosion and sediment control plans must meet the requirements of the "1983 Standards and Specifications for Soil Erosion and Sediment Control."¹⁵² However, an applicant may seek variance from the design requirements of the Standards and Specifications if strict adherence to the Standards and Specifications will result in unnecessary hardship and will not fulfill the intent of this ordinance.¹⁵³

Furthermore, the Office of Environmental Services must inspect each site that has an approved soil erosion and sediment control plan to ensure that sediment control measures are installed and effectively maintained in accordance with the approved plan and permit requirements.¹⁵⁴

A permit may be revoked or suspended for a number of reasons, including—

noncompliance with the grading or soil erosion and sediment control or any other condition of the permit;

violation of any provision of the ordinance or any other applicable Federal, State, or local laws;

existence of any condition that creates a nuisance or hazard to life or property; or

¹⁴⁸Grading and Sediment Control, Ordinance No. 100, Carroll County, Maryland, adopted on July 13, 1992, to be effective on September 1, 1992. § 2.2.A.

¹⁴⁹Id. § 2.2.B.

¹⁵⁰Id. § 2.3.A.

¹⁵¹Id. § 2.3.B.

¹⁵²Id. § 5.1.

¹⁵³Id. § 5.4.

¹⁵⁴Id. § 9.2.

failure of the approved soil erosion and sediment control plan to achieve required soil erosion and sediment control objectives.¹⁵⁵

In addition to the revoking and suspending authority, the Office may also issue a stop work order.¹⁵⁶

Upon conviction, all violators of this law are subjected to a fine not exceeding \$5,000 or imprisonment. Each day's violation constitutes a separate offense.¹⁵⁷ Moreover, a person, who continues to work in or about the property for which a Notice of Violation has been issued, is subject to a fine not to exceed \$1,000 or imprisonment not exceeding 30 days, or both.¹⁵⁸

Lee County, Georgia (region 2).—The Land Development Ordinance of Lee County provides that all property owners or their agents, or both, must follow sound conservation and engineering practices to prevent and minimize erosion and sedimentation.¹⁵⁹ To further this goal, the property owners or their agents, or both, must meet the following minimum requirements:¹⁶⁰

- Stripping of vegetation, or any other development activities, must be conducted in a manner so as to minimize erosion.
- Cut-and-fill operations must be kept to a minimum.
- Development plans must conform to topography and kind of soil so as to create the lowest practical erosion potential.
- Whenever possible, natural vegetation must be retained, protected, and supplemented.
- The disturbed area and the duration of exposure to erosive elements must be kept to a practicable minimum.
- Disturbed soil must be stabilized as quickly as possible.
- Temporary vegetation or mulching must be used to protect exposed critical areas during development.
- Permanent vegetation and structural erosion control measures must be installed as soon as feasible.
- To the extent necessary, sediment in runoff water must be trapped by using debris basins, sediment basins, silt traps, or similar measures until the disturbed area is stabilized.
- Adequate provisions must be in place minimizing damage from surface water to the cut face of excavations or the sloping surface of fills.
- Cut-and-fill operations may not endanger adjoining property.
- Fills may not encroach upon natural watercourses or constructed channels in a manner as to adversely affect other property owners.

¹⁵⁵ Grading and Sediment Control, Ordinance No. 100, Carroll County, Maryland, adopted on July 13, 1992, to be effective on September 1, 1992 § 10.1.A.

¹⁵⁶ *Id.* § 10.1.B.

¹⁵⁷ *Id.* § 10.2.

¹⁵⁸ *Id.* § 10.3.

¹⁵⁹ Land Development Ordinance, Lee County, GA § 9.2.2.

¹⁶⁰ *Id.*

- Grading equipment must cross flowing streams by means of bridges or culverts except when such methods are not feasible, and in case of unfeasibility, crossings must be kept at minimum.
- Erosion and sedimentation control plans must include provisions for treatment to control any source of sediment and adequate sedimentation control facilities to retain sediments on site or preclude sedimentation of adjacent streams beyond specified levels.
- Land disturbing activities must not be conducted within 25 feet of the banks of any State water, unless provided otherwise by variance.
- Land disturbing activities must not be conducted within 100 horizontal feet of the banks of any State water classified as *trout streams*, unless provided otherwise by variance.

However, all erosion and sedimentation prevention requirements are exempted for the following activities:¹⁶¹

- Surface mining.
- Granite quarrying and land clearing for such quarrying.
- Minor land-disturbing activities, such as home gardens and individual home landscaping, repairs, maintenance work, and other related activities that result in minor soil erosion.
- The construction of a single-family residence when it is constructed or by under contract with the owner-occupant or the construction of single-family residences not a part of a larger project and not otherwise exempted.
- Agricultural operations, including raising, harvesting or storing of products of the field or orchard; feeding, breeding or managing livestock or poultry; producing or storing feed for use in the production of livestock; producing plants, trees, or animals; production of aquaculture; forestry land management.
- Any project carried out under the technical supervision of the USDA, NRCS.
- Any project involving land 11/10 acres or less.
- Construction or maintenance projects, or both, undertaken or financed, or both, in whole or in part by the Georgia Department of Transportation, the Georgia Highway Authority, or the Georgia Tollway Authority; or any road construction or maintenance project, undertaken by any county or municipality.
- Any land-disturbing activities conducted by any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission.

In addition, discharges of stormwater runoff from disturbed areas must be controlled to the extent that turbidity of the stormwater runoff does not exceed 100 Nephelometric Turbidity Units (NTU) higher than the turbidity level of the receiving stream immediately upstream from the stormwater runoff discharge at the time of such discharge.¹⁶² (*NTU is an abbreviation for Nephelometric Turbidity Unit. This turbidity measure is based on a comparison of the intensity of light scattered by a sample of water under defined conditions with the intensity of light scattered by a standard reference suspension.*)

¹⁶¹Land Development Ordinance, Lee County, GA § 9.1.

¹⁶²Land Development Ordinance, Lee County, GA § 9.1.

Worth County, Georgia (region 2).—In 1989, the City of Sylvester enacted the Soil Erosion and Sediment Control Ordinance,¹⁶³ which is applicable to Worth County.

Similar to the Soil Erosion and Sedimentation Prevention provisions of Lee County,¹⁶⁴ the Soil Erosion and Sediment Control Ordinance of Sylvester provides that the ordinance applies to all land-disturbing activities, except the following activities:¹⁶⁵

- Surface mining.
- Granite quarrying and land clearing for such quarrying.
- Minor land-disturbing activities such as home gardens and individual home landscaping, repairs, maintenance work, and other related activities, which result in minor soil erosion.
- The construction of a single-family residence when such is not constructed by or under contract with the owner-occupant, or the construction is not part of a larger project that is not exempted from this ordinance.
- Agricultural practices regarding the establishment, cultivation, or harvesting of products of the field or orchard, the preparation and planting of pasture land; forest land management practices, including harvesting; farm ponds; dairy operations; livestock and poultry management practices; and the construction of farm buildings.
- Any project carried out under the technical guidance of the USDA, NRCS.
- Any project involving land 1 1/10 acres or less, provided that this exception will not apply to any land-disturbing activity within 200 feet of the bank of any State water.¹⁶⁶
- Construction or maintenance projects, or both, undertaken or financed, or both, in whole or in part, by the Georgia Department of Transportation, the Georgia Highway Authority, or the Georgia Tollway Authority, or any road construction or maintenance project, or both, undertaken by any county or municipality; or construction and maintenance by any water or sewage authority;
- Any land-disturbing activities conducted by any airport authority, provided that such activities conform to the minimum requirements for erosion and sedimentation control.
- Any land-disturbing activities conducted by any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, provided that such activities conform to the minimum requirements for erosion and sedimentation control.

The ordinance provides that beginning any land-disturbing activities, all persons must obtain a permit from the Issuing Authority.¹⁶⁷ The applicant must include in the permit application the erosion and sedimentation control plan¹⁶⁸ with supporting

¹⁶³Soil Erosion and Sediment Control Ordinance, City of Sylvester, GA, Ordinance No. 89-8, § 1 et seq. (1989).

¹⁶⁴Land Development Ordinance, Lee County, GA § 9.1.

¹⁶⁵Soil Erosion and Sediment Control Ordinance, City of Sylvester, GA, Ordinance No. 89-8 § III (1989).

¹⁶⁶State water excludes channels and drainage ways that have water in them only during and immediately after rainfall events and intermittent streams which do not have water in them year-round. Id.

¹⁶⁷Soil Erosion and Sediment Control Ordinance, City of Sylvester, GA, Ordinance No. 89-8 § V.B.

¹⁶⁸For a detailed description of the requirements for the erosion and sedimentation control plan Id. § V.C.

data and the \$25 fee.¹⁶⁹ Failure to obtain the required permit will result in revocation of the business license, work permit, or other authorization to conduct business and associated work activities within the jurisdictional boundaries of the Issuing Authority.¹⁷⁰

To prevent and minimize erosion and resulting sedimentation, permittee must comply with a set of minimum requirements. They must do the following:¹⁷¹

- Conduct stripping of vegetation to minimize erosion with development activities.
- Keep cut-and-fill operations to a minimum.
- Conform all development plans to topography and kind of soil to create the lowest practical erosion potential.
- Retain, protect, and supplement natural vegetation, whenever feasible.
- Keep the disturbed area and the duration of exposure to erosive elements to a practicable minimum.
- Stabilize disturbed soil as quickly as practicable.
- Use temporary vegetation or mulching to protect exposed critical areas during development.
- Install permanent vegetation and structural erosion control as soon as feasible.
- Use debris basins, sediment basins, silt traps, or similar measures to trap sediment in runoff water until the disturbed area is stabilized.
- Provide adequate provisions to minimize damage from surface water to the cut face of excavations or the sloping surface of fills.
- Ensure that cut-and-fill operations will not endanger adjoining property.
- Ensure that fills will not encroach upon natural watercourses or constructed channels to adversely affect other property owners.
- Ensure that grading equipment crosses flowing streams by means of abridges or culverts.
- Include provisions for control or treatment of any source of sediments and adequate sedimentation control facilities in land-disturbing plans for erosion and sedimentation control.
- Disallow land-disturbing activities to be conducted within the 100-year flood plain, unless such is in compliance with any applicable local flood plain management ordinance.
- Retain an undisturbed natural vegetative buffer of 25 feet measured from the streambanks adjacent to any State water.
- Disallow any land-disturbing activities to be conducted within 100 feet (horizontal) of the banks of any State water classified as *trout streams*.
- Control discharges of stormwater runoff from disturbed areas to the extent that turbidity of the stormwater runoff will not exceed 50 NTU.

¹⁶⁹Id. § V.C.

¹⁷⁰Id. § VII.A.

¹⁷¹Id. § IV.B.

The ordinance requires the building inspector to inspect periodically the sites of land-disturbing activities for which permits have been issued to determine if—
 activities are being conducted in compliance with the plan, and
 measures in the plan are effective in controlling erosion and
 sedimentation.¹⁷²

Furthermore, the building inspector is authorized to conduct investigations necessary to carry out duties set forth in the ordinance.¹⁷³ If noncompliance exists, a notice must be issued setting forth measures necessary to achieve compliance.¹⁷⁴ Upon such notice, work on any project that is done contrary to the provisions of the ordinance or in a dangerous or unsafe manner, will be immediately stopped.¹⁷⁵ However, the aggrieved party may seek administrative remedies by requesting a hearing before the Middle South Georgia Soil and Water Conservation District within 20 days after receiving the written notice of appeal.¹⁷⁶ If after exhausting the administration remedies, the aggrieved party may seek judicial review by requesting an appeal de novo to the Superior Court of Worth County.¹⁷⁷

Chicot County, Arkansas (region 3).—No county laws, rules, regulations or ordinances exist that are related to conservation activities in Chicot County. The Arkansas Conservation District Law is the only State law that provides specific guidance to conservation activities in the State. However, the Natural Resource Conservation Service does offer assistance through conservation districts to assist cooperators to comply with a number of State environmental laws and regulations, such as the Arkansas Dam Permitting Law, the Arkansas Water and Air Pollution Act, the Arkansas Pesticide Control Act, and the Arkansas Disposal of Fowl Carcasses Act.

Polk County, Nebraska (region 5).—Because Polk County belongs to the Central Platte Natural Resources District (NRD), it is subject to the State Erosion and Sediment Control Act adopted by the Central Platte NRD. The main purpose of the Central Platte District rules and regulations is to provide for the conservation and preservation of the land, water, and other resources of the district.¹⁷⁸

The district law applies to all lands within the district.¹⁷⁹ However, there are a number of exemptions from the application of the law, including—
 the land of the county or municipality which has adopted and is
 implementing erosion and sediment control regulations;¹⁸⁰ and

lands on which some nonagricultural land-disturbing activities are
 occurring.¹⁸¹

Nonagricultural land-disturbing activity is defined to mean "a land change including, but not limited to, tilling, clearing, grading, excavating, transporting, or filling land which may result in soil erosion from wind or water and the movement

¹⁷²For a detailed description of the requirements for the erosion and sedimentation control plan, Id. § VI.A.

¹⁷³Id. § VI.B.

¹⁷⁴Id. § VI.A.

¹⁷⁵Id. § VII.B.

¹⁷⁶Id. § VIII.A.

¹⁷⁷Id. § VIII.B. De novo means anew, afresh. In a de novo trial, the matter is heard as if it had never been heard before, and as if there had been no previous decision rendered. *Black's Law Dictionary*.

¹⁷⁸Central Platte Natural Resources District, Rules and Regulations, Erosion and Sediment Control Act, Rule 2.

¹⁷⁹Id. Rule 3.

¹⁸⁰Central Platte Natural Resources District, Rules and Regulations, Erosion and Sediment Control Act, Rule 3.

¹⁸¹Id.

of sediment and sediment-related pollutants into the water . . . or onto lands of the state."¹⁸² However, it does not include—

activities related directly to the production of agricultural, horticultural, or silvicultural crops;

installation of above ground public utility lines and connections, fence posts, sign posts, etc.;

emergency work to protect life or property; and

activities related¹⁸³ to the construction of housing, industrial, and commercial developments.

The board also adopts soil loss limits for the various types of soils in the district.¹⁸⁴ The permitted soil-loss for particular lands may not exceed the T-value set forth by the standard.¹⁸⁵ However, the committee may recommend and the board may approve a variance from the soil-loss limit if it determines that a limit of T cannot reasonably be applied to land.¹⁸⁶ Nevertheless, in no case can the permitted soil-loss limit exceed 2 T.¹⁸⁷

The district law provides that the board must delegate the responsibility of administering the rules to the district manager.¹⁸⁸ The district manager has the duties and powers to:¹⁸⁹

- Keep an accurate record of all complaints received, investigations made, and other official actions.
- Investigate all complaints made in writing to the district office regarding the application of these rules and regulations and report in writing all alleged violations to the board.
- Monitor compliance with all farm unit conservation plans approved and orders issued by the board.
- Enter upon any public or private lands to investigate complaints and to make inspections to determine compliance.
- Report to the board any violations of any administrative order or rules and regulations issued by the board.
- To commence any legal proceedings necessary to enforce these rules and regulations and any order issued by the board.

The district law lists four factors indicating whether a violation of the rules and regulations exists. A violation exists if—

sediment damage is occurring;

average annual soil losses on the land that is the source of that damage are exceeding the soil-loss limits indicated by the law;

¹⁸²Central Platte Natural Resources District, Rules and Regulations, Erosion and Sediment Control Act, Rule 4(f).

¹⁸³Central Platte Natural Resources District, Rules and Regulations, Erosion and Sediment Control Act, Rule 2.

¹⁸⁴Id. Rule 5.

¹⁸⁵Id. T-value is defined to mean the "average annual tons per acre soil loss a given soil may experience and still maintain its productivity over an extended period of time." Id. Rule 4(h).

¹⁸⁶Central Platte Natural Resources District, Rules and Regulations, Erosion and Sediment Control Act, Rule 12.

¹⁸⁷Id.

¹⁸⁸Id. Rule 6.

¹⁸⁹Id.

the activity causing the soil loss is not an exempted nonagricultural land disturbing activity; and

the land that is the source of that damage is not in strict compliance with a conservation agreement approved by the district.¹⁹⁰

The district law also allows cost-share assistance. It provides that if at least 90 percent cost-sharing assistance is not available to any owner or operator for the installation of permanent soil and water conservation practices to conform with agricultural, horticultural, and silvicultural practices to the applicable soil-loss limit, the owner or operator is not required to install such practices until such cost-sharing assistance is made available.¹⁹¹

Greene County, Tennessee (region 11).—A soil erosion and sediment control ordinance exists in the city of Greeneville and applies in this city only. This ordinance applies only to land developers, not individual landowners or operators.

Washington County, Tennessee (region 11).—A soil erosion and sediment control ordinance exists in Washington County. However, it only applies to the construction of new roads.

Haywood County, Tennessee (region 12).—In Haywood county, there is no soil erosion and sediment control ordinance.

Shelby County, Tennessee (region 12).—No soil erosion and sediment control ordinance exists in Shelby County.

Tipton County, Tennessee (region 12).—A soil erosion and sediment control ordinance exists in Tipton County. It provides that before approving the preliminary plan, the planning commission must determine whether there is a need for an erosion control plan to minimize erosion during construction of the subdivision. If an erosion control plan is required, such plan must be approved by both the planning commission and the NRCS representative. Moreover, if necessary, the Planning Commission may require structural or other improvements designed to prevent or minimize long-term erosion and siltation from within the subdivision. This ordinance emphasizes that in determining the appropriate improvements for controlling erosion and siltation, the NRCS must be consulted extensively.

Erosion and sediment control laws in a selected township

West Hempfield Township, Lancaster County, PA (region 1).—The Township of West Hempfield controls soil erosion and manages the stormwater through its Stormwater Management and Erosion Control Ordinance of 1980.¹⁹² This ordinance was created under the authorization granted by the Act of July 31, 1968, Act 247, the Pennsylvania Municipalities Planning Code, which allows the governing body of each municipality to regulate subdivision and land developments.¹⁹³

¹⁹⁰Central Platte Natural Resources District, Rules and Regulations, Erosion and Sediment Control Act, Rule 7.

¹⁹¹Id. Rule 17(a).

¹⁹²Stormwater Management and Erosion Control Ordinance for West Hempfield Township, PA 1980 § 1.01 et seq.

¹⁹³Id. § 1.02.

The ordinance provides that any persons, partnership, business, or corporation must seek municipal approval to undertake any of the following activities:¹⁹⁴

- Land-disturbing activity involving 1/2 acre or more (except agricultural activity).
- Diversion or piping of any natural or constructed stream channel.
- Installation of stormwater system or appurtenances.
- Placement of fill, structures, or pipes in the flood plain or natural drainage ways.
- Installation of impervious cover, 10,000 square feet or more in an area.

Under this ordinance, an Erosion and Sedimentation Control Plan is required for all the activities described above.¹⁹⁵ However, there are exceptions to certain items of the Erosion Control Plan for plans that do not require dedication of additional rights-of-way.¹⁹⁶ Once the plan is approved, applicants must adhere to the approved plan.¹⁹⁷ This plan must consist of a map and a narrative.¹⁹⁸ For subdivision and land development activities, include it as part of the total land subdivision and development submission(s) to the municipality and include the following items:

- The general statement of the project.
- Topographic features of the project area to be shown on the map.
- The proposed alteration to the area to be shown on the map.
- All lots will be graded and houses constructed at such an elevation that they would not be flooded during a 50-year frequency storm.
- Runoff calculations.
- The staging of land-disturbing activities must be described in the narrative, detailing the sequence of erosion control installation in relation to the installation of improvements.
- Temporary and permanent control measures and facilities must be shown on the map and described in the narrative.
- The maintenance program for control facilities must be included in the narrative, describing the method of disposal of materials removed from the control facilities or the project area.¹⁹⁹

Moreover, the ordinance also requires that all erosion control facilities meet the minimum design standards and specifications set forth in the *Erosion and Sedimentation Control Handbook for Lancaster County*.²⁰⁰ This handbook includes the following:

- All temporary holding facilities must be designed to meet the minimum standards and specifications for *debris basin* as indicated by the Handbook.
- As a minimum, all permanent holding facilities must have the capacity to provide the required combination of storage and emergency spillway to

¹⁹⁴Stormwater Management and Erosion Control Ordinance for West Hempfield Township, PA 1980 § 1.03.

¹⁹⁵Id. § 4.02.

¹⁹⁶Id. § 4.01.A.

¹⁹⁷Id. § 4.02.

¹⁹⁸Id. § 3.01.

¹⁹⁹Central Platte Natural Resources District, Rules and Regulations, Erosion and Sediment Control Act, Rule 2. § 3.01.

²⁰⁰Id. § 3.02.

accommodate the runoff from a 25-year storm frequency from drainage areas of one-half square mile or less.

- The peak discharge leaving the site from a 2-year frequency storm event after development must be limited to the peak discharge of a 2-year storm before development.
- Grassed waterways may be used in lieu of conduit piping in those areas where soil conditions permit recharge of ground water. As a minimum, such grassed waterways must be of sufficient size to confine the anticipated peak runoff from a 10-year frequency storm event. Moreover, the allowable velocities within the waterway must be limited to those values that would not cause erosion of the soil or cover material.

The ordinance provides that construction standards of erosion control facilities must be in accordance with the approved plan and accompanying specifications. The construction criteria listed in the handbook are considered the minimal acceptable standard.²⁰¹

Because maintenance is an indispensable part of the successful functioning of a stormwater management system, the ordinance outlines certain maintenance criteria for erosion control practices.²⁰² Maintenance during development of a project will be the responsibility of the developer or landowner, or both, and must usually include, but is not limited to—

removal of silt from all debris basins, traps, or other structures or measures when 60 percent of capacity is filled with silt;

periodic maintenance of temporary control facilities such as replacement of straw bale dikes, straw filters, or similar measures;

establishment or re-establishment of vegetation by seeding and mulching or sodding of scoured areas or areas where vegetation has not successfully been established;

installation of necessary control to correct unforeseen problems caused by storm events within design frequencies; and

contractor or developer will be responsible for removal of all temporary measures and installation of permanent measures upon completion of the project.

Furthermore, maintenance and supervision of developed areas is the duty of the party responsible for land development (this responsibility can be retained or assigned to third persons).²⁰³ However, if the permanent erosion control facilities and necessary rights-of-way are dedicated to the municipality, it will be the municipality's responsibility to maintain these facilities.²⁰⁴

Furthermore, if a property owner fails to comply with the requirements of this ordinance, the ordinance provides that the municipality must issue a written notification of such violation.²⁰⁵ Noncompliance will subject the violators to a fine or penalty of not less than \$250 but not exceeding \$1,000, plus the cost of

²⁰¹Stormwater Management and Erosion Control Ordinance for West Hempfield Township, PA 1980 § 3.03.

²⁰²Id. § 3.04.

²⁰³Id. § 3.04.

²⁰⁴Id. § Art. 5, Ownership and Maintenance Provision.

²⁰⁵Id. § 4.04.

prosecution. Each day's violation constitutes a separate offense.²⁰⁶ In case of default of payment, violators can be imprisoned in the county jail for not more than 60 days.²⁰⁷

In the event that any building, structure, or land is, or is proposed to be, erected, constructed, altered, converted, maintained, or used in violation of this ordinance, the government body, in addition to other remedies, may institute in the name of the municipality any appropriate action or proceeding to prevent such violation.²⁰⁸

²⁰⁶Stormwater Management and Erosion Control Ordinance for West Hempfield Township, PA 1980 § 4.05.A.

²⁰⁷Id.

²⁰⁸Id. § 4.05.B.